

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004823**Date Inspected:** 28-Nov-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

The Caltrans (CT) Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

OBG Sub-Assembly Bay 1:

The QA Inspector randomly observed 2 Magnetic Drill Operators drilling bolt holes in U-Ribs U-155 and U-157 prior to forming.

OBG Sub-Assembly Bay 2:

The QA Inspector randomly observed 3 Magnetic Drill Operators drilling bolt holes in Skin Plate Longitudinal Stiffeners A709 HPS 485 piece mark A573 (E).

OBG Sub-Assembly Bay 3:

The QA Inspector randomly observed ZPMC welder Wu Zhi Bin ID 049804, utilizing the Submerged Arc Welding (SAW) Process in 1G Position 1 with ZPMC Weld Procedure Specification (WPS) WPS-B-T-3221-B-U3c-S-1, to weld a butt splice between Deck Plate DP653-001 Sections DP653A/PL1240A and DP653A/PL1241A at Weld Joint (WJ) DP653-001-038. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements. The attached

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photograph provides additional detail.

OBG Bay 4:

The QA Inspector randomly observed ZPMC NDT Technician Cai Xin Xin, utilizing the Magnetic Particle Testing (MT) Method to perform a final MT examination on the cover pass of the fillet welds on Edge Plates EP92A Yellow Tag 001945 (EP092-001) Location 7DE-B3 WJ's 001 through 004, EP74A Yellow Tag 001946 (EP074-001) Location 8BW-F9 WJ's 001 through 04, Bottom Plate BP40A Yellow Tag 001729 (BP040-001) Location 8AW-D6 WJ's 014 and 016 after weld repair B-WR1510 and Side Plate SP726A Yellow Tag 001572 (SP726-001) Location 8CW-E7 WJ 030 for Critical Weld Repair B-CWR227. There appeared to be no indications and ZPMC QC accepted all the above listed welds.

The QA Inspector performed a 100% final Visual Testing (VT) and 10% MT verification on the cover pass of the fillet welds on Edge Plates EP92A Yellow Tag 001945/Green Tag 002222 (EP092-001) Location 7DE-B3 WJ's 001 through 004, EP74A Yellow Tag 001946/Green Tag 002221 (EP074-001) Location 8BW-F9 WJ's 001 through 04, Bottom Plate BP40A Yellow Tag 001729/Green Tag 002224 (BP040-001) Location 8AW-D6 WJ's 007 through 018 and 043 through 054; and Side Plate SP726A Yellow Tag 001572/Green Tag 002223 (SP726-001) Location 8CW-E7 WJ's 030 through 041. There appeared to be no indications and the QA Inspector accepted all the above listed welds.

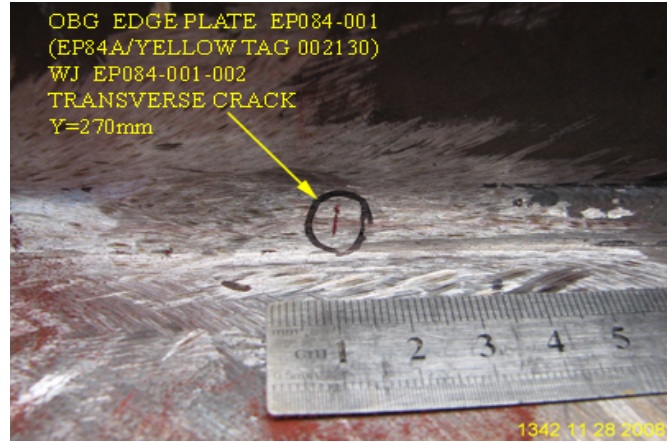
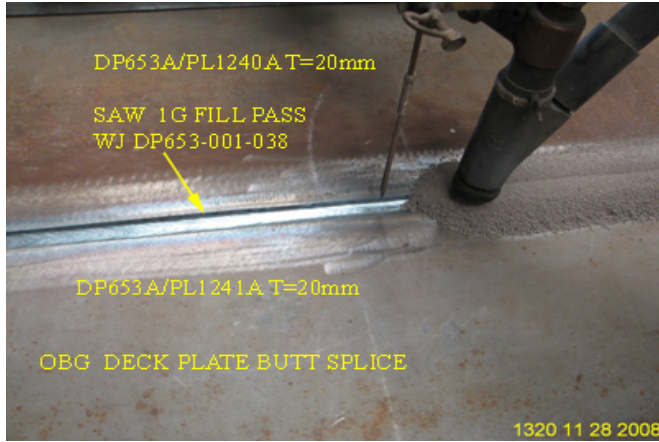
The QA Inspector randomly observed ZPMC NDT Technician Cai Xin Xin, utilizing the MT Method to perform a final MT examination on the cover pass of the fillet welds on Edge Plates EP76A Yellow Tag 002131 (EP076-001) Location 8CW-F9 WJ's 001 through 004, EP82A Yellow Tag 002132 (EP082-001) Location 8DE-F9 WJ's 001 through 04 and EP88A Yellow Tag 001947 (EP088-001) Location 8CE-F9 WJ's 001 through 004. There appeared to be no indications and ZPMC QC accepted all the above listed welds.

The QA Inspector randomly observed ZPMC NDT Technician Cai Xin Xin, utilizing the MT Method to attempt to perform a final MT examination on the cover pass of the fillet welds on Edge Plate EP84A Yellow Tag 002130 (EP084-001) Location 8CW-F9 WJ's 001 through 004. Mr. Cai and the QA Inspector observed a transverse crack in WJ 004 at Y=270 mm. Mr. Cai rejected the MT examination of EP84A. The attached photograph provides additional detail.

The QA Inspector performed a 100% final Visual Testing (VT) and 10% MT verification on the cover pass of the fillet welds on Edge Plates EP76A Yellow Tag 002131/Green Tag 002219 (EP092-001) Location 8CW-F9 WJ's 001 through 004, EP82A Yellow Tag 002132/Green Tag 002218 (EP082-001) Location 8DE-F9 WJ's 001 through 04, EP88A Yellow Tag 001947/Green Tag 00222 (EP088-001) Location 8CE-F9 WJ's 001 through 04. There appeared to be no indications and the QA Inspector accepted all the above listed welds.

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Summary of Conversations:

As noted in the above body of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Peter Dautermann, 15002199593, who represents the Office of Structural Materials for your project.

Inspected By: Franco,Charlie

Quality Assurance Inspector

Reviewed By: Wright,Mark

QA Reviewer